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ABSTRACT

The aim of this study was to identify various media in which material is to be cataloged and the information about each that is required; to consider an effective system of classification and cataloging which would be compatible with extant national and international systems; to outline the organization necessary to collect, process and disseminate the information and prepare estimates of cost; and to list distributors of materials from whom information would be sought and with whom contact would need to be maintained. The first section of the report considers the broad problems of collection and dissemination and attempts to relate them to other developments in the field. The second section describes the content of the ideal catalog; examines the cataloging being done by agencies in the field; and in the light of these two factors makes recommendations as to the feasibility of the catalog. The appendices include charts and tables, a sample budget, a suggested system of media classification, and a list of sources of materials. [Not available in hardcopy due to margial legibility of original document.] (Author/JY)

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A Feasibility Study of a Multimedia Catalogue

University of Sussex

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September 1969

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A FEASIBILITY STUDY OF A

MULTI MEDIA CATALOGUE

A project financed by a grant from

THE OFFICE FOR SCIENTIFIC AND TECHNICAL INFORMATION

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REPORT TO O.S.T.I. ON PROJECT S1/25/36

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A FEASIBILITY STUDY OF A MULTI-MEDIA CATALOGUE

Terms of Reference

The terms of reference of this study were set out in the original proposal to OSTI as follows:-

1. to identify various media in which material is to be catalogued and the information about each that is required;

2. to consider the principles of a classification system and cataloguing procedure which would most effectively display the information required, while taking into account the main existing national and international systems;

3. to consider, in conjunction with the British National Bibliography, how best the information might be disseminated;

4. to outline the organisation necessary to collect, process and disseminate the information and prepare estimates of cost;

5. to list distributors of materials from whom information would be sought and with whom contact would need to be maintained.

The report which follows is in two parts.

Part I considers the broad problems of collection and dissemination (reference 3. and 4. above) and attempts to relate them to other developments in the field.

Part II considers the detailed problems relating to the documentation of media, particularly as they affect the production of a catalogue. It also refers to dissemination in so far as it relates to the distribution of a catalogue and gives some estimates of cost (reference 1., 2., and 5. above and some aspects of 3. and 4.).

PART I - GENERAL CONSIDERATIONS

1 Introduction

11 When this project was first conceived in discussions with the National Council for Educational Technology it was seen as an investigation into the production of a catalogue for other media comparable to the British National Film Catalogue (which was itself closely related to British National Bibliography). Part II of the report constitutes a record of such an investigation. However, since then, the National Council for Educational Technology has had time to establish an overall national view of the field and almost as the main part of this report was completed the Report of the National Libraries Committee was published.

12 This latter is particularly significant to this report as it correctly sees the need for an overall bibliographic service. However, throughout the report, reference is made to the printed word as a source of information. But if it is information with which we are primarily concerned, the form in which it is recorded is not significant. Whilst the printed word will undoubtedly, rightly, dominate the information scene for as far ahead as can be foreseen we can no longer ignore the contribution of other media. It follows therefore that the National Bibliographic Service as proposed in the report should from the beginning include all media. It is likely that NCET as a body particularly concerned with media as well as the printed word would support this view in the light of its consideration of the problems over the last few months.

13 Thus although Part II of this report envisages a machine readable catalogue arising out of a national multi-media catalogue, if the recommendations of the National Libraries Committee are accepted and implemented, it might well be that the sequence would be reversed and that the multi-media catalogue would arise out of a machine readable catalogue.

14 In considering the organisation of the documentation of information two objectives must be borne in mind. The first objective is to record the information; the second is to disseminate it. Normally dissemination is achieved by printing; abstract bulletins, catalogues, computor print-out, card indexes, books; the style of printing and the function of the

publication differ widely. There is also an economic factor to be considered. To collect information costs money. It is convenient if users can be made to pay for the use they make of it. A subscription allowing access to the information is difficult to cost and limits the number of potential users to those conveniently situated. The funds necessary to keep the record going may not then be forthcoming. The record will be reduced to save money and the service will gradually deteriorate. (This problem has faced many associations working in the media field). On the other hand a publication which can be sold brings in funds and disseminates the information more widely. It thus enables the first objective to be achieved and implements the second objective. This principle applied to both BNB and BNFC (which was designed in close collaboration with BNB).

15 With other media and with the more detailed records which might ultimately be required for the analysis of film and tape records it is doubtful whether the demand yet exists which would justify publication. This could not then be relied upon immediately as an adequate source of funds. Yet the information must be indexed now if posterity is not to be woefully short of records. More important, by indexing now it will be possible to stimulate interest in using these records and generate understanding of their use.

16 It follows therefore that, whilst the project for a multi-media catalogue could be implemented as originally envisaged and as set out in Part II of the report, if a National Bibliographic Service is set up the form of the project for a multi-media catalogue could be changed. In either case it would be necessary to provide support funds and it is for the Department of Education and Science to take the final decision on how these should be allocated. What is important is that a decision should be taken quickly for material is being produced all the time. The longer the delay the more records will be missed. It must be recognised that a retrospective record system is almost impossible to operate. Further the production of audio-visual media is expanding rapidly. If the recording system is not soon established it will be faced with an overwhelming and unnecessarily expensive task in dealing with a flood of materials and discovering how to organise itself at the same time.

2 Organisation

21 So far we have referred principally to the recording of the information. Although this is a vital step it is only a small part of the information problem. There is an ancillary problem, that of organising the collection of the information and a major problem: that of organising its effective use.

3 The collection of information

31 Perhaps the most significant difference between the BNB and a multi-media catalogue is the lack of a law of deposit for non-book materials. It follows that the collection of information on non-book materials is a much more positive process than is required for the vast bulk of printed matter. Indeed one might almost say that an intelligence system is required which is designed to feed information into the collection point. Further, an effective intelligence system must be integrated with the activity from which it is drawing information. Such intelligence systems may already be said to be operating for films through the BNFC and for programmes through the Association of Programme Learning. In both these cases the aim is to acquire a complete record of the particular type of publication. Similar systems exist with EFVA and BACIE (for programmes) but here the constraint is imposed not by type of media but rather intended user. Since we are discussing here a catalogue of all media the first two examples have basic aims in common with the project under discussion and are therefore more significant. The second two examples would however have a valuable reinforcement role to the basic information collection system.

32 It could be argued that the central documentation agency in which the information is filed could and should be wholly responsible for collecting information directly. There is undoubtedly a degree of involvement (referred to above) which is necessary if information is to be drawn out of the different systems in which the media are produced, but this could be acquired over a period of time. Indeed this might well become the eventual pattern of activity. But, for the present, it seems sensible, and perhaps economic to recognise that expertise with some materials already exists and any new centre should take advantage of it. It would in any case seem to be fundamental that any proposal for a national information centre should not in any way weaken organisations already operating in the field. One aspect of this would be to use their information collecting systems.

4 Using the Information

41 The case for maintaining and strengthening existing associations is even stronger when one considers the problem of using the information. It is very seldom that anyone requires a comprehensive answer to a question. What is required is a selective answer and most people will need some help in deciding what the criteria of the selection should be. It follows that a complete record of all media will not in itself be directly beneficial to

to the individual enquirer. The BNB and BNFC aim to be such complete records and as such constitute a very sophisticated presentation of information. They need some degree of experience if they are to be used effectively. The BNB can rightly assume that this exists in a professional librarian and since enquiries about books come through libraries and booksellers there is an agent who can interpret the BNB to non specialist enquirers. Since the publication of BNFC it has been evident that although there was a need for film information which the Catalogue met there was difficulty in relating its service to this need since there was not the equivalent of the book librarian to carry out this interpretive role. There are film librarians who could use BNFC but there is not the broad experience of film which would enable full use to be made of it. There is little doubt that there is a growing understanding of what BNFC offers and there is no doubt that a similar understanding would eventually be achieved in relation to the documentation of other audio-visual materials. Indeed, as has already been suggested, one would hope that one of the benefits of a central catalogue would be that it could promote a better understanding of the problems of organising information recorded in different media and a growing appreciation of the benefits of using this information.

42 It is thus important to recognise that because there is at this moment in time, a structure of activity into which a complete record of books fits there is a market for BNB as a published record of books published in Great Britain, but that such a structure does not at present exist for all other media. It is likely that as libraries grow automatically to include all media such a structure will develop. The indications are that there is a market requirement for BNFC and Programmes in Print. There may not yet be a viable market for a published catalogue of all media and finance may be needed to support the project until it is viable.

43 However, there is undoubtedly at this time a need for selective information. The list of film and film strips in chemistry published by the Royal Institute of Chemistry; the BACIE list of programmes and various subject guides all demonstrate this fact. They further demonstrate the need for specialised agencies to produce them. It is thus suggested that individual users would not normally need to have direct access to a complete record of information but would approach it through a specialist agency. Eventually one such group of agencies may be the library system and it may be that the growth of this system to cover all media will be the key factor in deciding whether or not to publish a complete record of the information store. Already BNB is clearly directed to libraries and a high proportion of the subscriptions to BNFC also come from libraries of one kind or another.

5 The information gap

51 It thus follows that in considering the gap in information available about media we are concerned not just with the documentation of different media. This is an essential step but it is equally important to establish the channels by which such information can be disseminated.

52 There needs to be some agency with overall responsibility for organising the information store (but not necessarily running it) but in addition this agency should see that through the services it extends to existing specialist agencies they are enabled to distribute to the community the information contained in the store. Such an organising function might fall to NCET who are already concerned with this problem.

53 To a large extent existing organisations meet the need for specialist agencies although their function and responsibilities might well be more clearly defined. (Such clarification should not imply the elimination of overlapping responsibilities. Some duplication in information work is essential. A teacher should certainly be able to go to the RIC, EFVA and APLET for their interpretation of the information available on Programmes available in Chemistry. It is for him to decide whose view he will accept and act upon. But it is wasteful for each of three organisations to tell him a programme is published. One record can do this.)

54 In summary therefore it is envisaged that a central body, probably NCET, would have overall responsibility for managing an information store of information media. This would either be a published record building up a machine readable record (almost as a by product) or a machine readable record, producing printed records as required. In addition the central agency would have a co-ordinating function in relation to associations and groups working in the field and would have funds available to augment/enhance in appropriate ways their information activities. Such associations would be treated as the major sources of information for the store but in time the store may become its own direct collector in some areas.

55 The nation has clearly decided to support some aspects of information. The Report of the National Libraries Committee makes clear reference to many examples. The Report goes on to assume that the nation must support a

national basic service leaving individuals and associations free to exploit this as their needs require and their resources allow. On this argument there is a strong case for a centrally supported media information store, out of which publications would be produced. It would be for different groups to decide whether the cost of production (including a fee to the store) could be covered by funds available from members or subscriptions. Fees paid to the store would offset some of its costs but the existence of the store should no more depend on the receipt of adequate funds from users than does the public library service, the British Museum or any other publicly supported information services referred to in the National Library Report.

PART II - THE CATALOGUE

1 Introduction

11 This report will describe the content of the ideal catalogue; examine the cataloguing being done by agencies in the field and in the light of these two factors will make recommendations as to the feasibility of the catalogue.

12 Geographical limits of the catalogue (Recommendations 11, 16-18)

121 The British National Bibliography and the British National Film Catalogue interpret the meaning of National in different ways. The former has a more logical interpretation namely a catalogue of books published in the United Kingdom. The latter, although originally a catalogue of films produced in the United Kingdom, subsequently extended its coverage to include films available in the United Kingdom. This arose mainly because media are so disorganised bibliographically that it was not possible to find a convenient record of foreign films in Britain. The plan, of which the BNFC was to be part, for a set of European National Film Catalogues, has never come to fruition and this increased the pressure on BNFC to add foreign films to its record. In addition the limitation to films available in Britain had some meaning given the great difficulty of obtaining films for single screenings from abroad.

13 However it is clear that given the increasing availability of international media materials a catalogue based on availability in the United Kingdom would become impossible to define and would ultimately be international in its coverage. It is therefore proposed that for the purpose of this report the catalogue should be a national one of materials produced in the United Kingdom.

14 Co-operation with other countries should be encouraged so that with comparable national catalogues elsewhere an international record would be built up. BNB is already co-operating with the Library Congress in the MARC project and there is no doubt that this co-operation could be extended to cover other media. The records of American and British materials would thus be correlated and this would represent a significant step towards an international information service.

15 The purposes of a national catalogue of whatever kind are taken to be as follows:

(i) To record the full output of the nation. To document the intellectual resources of this country as the physical resources are documented.

(ii) To do this in a way that allows

(a) immediate access to the single item;
(b) easy retrospective searching.

(iii) To set a standard of bibliographical control within its field.

(iv) To assist the exploitation of the materials catalogued.

2 Terms of reference of the Catalogue (Recommendations 4-21)

21 Media - The catalogue should cover all published materials in which information is recorded excluding books and other printed forms already included in the British National Bibliography.

22 Publication - The catalogue must be limited to published items. A definition of publication is that the item must be issued in a number of copies. That it must have a price attached either directly, e.g. a copy costs 40/-, or indirectly in that it is a recognised perquisite to a payment made for other purposes. This would include maps issued as part of a magazine; programmes available only to the members of a society, etc. If there is no price attached the conditions of availability should be clearly stated. These should normally allow a wide audience for the item. Items intended only for circulation within an organisation with no prior intention of wider distribution, especially those of an administrative nature, are not published.

221 Programmes - There is one group of materials that presents an indexing problem peculiar to itself. These are the materials known as programmes. The range of these covers forms as various as printed books to computer programmes. Where the programme exists in book form it is already being catalogued in a context outside that of all the other media, i.e. The British National Bibliography. This is accidental due to the physical form of the teaching machine being similar to that of a book.

There is no other real resemblance and the two forms are not interchangeable. The user of a book does not want a programme and the user of the programme is looking for something a book cannot give. The multi-media catalogue therefore must include the programmed textbook as much as any other programme. This particular media will also need to develop a taxonomy. It is at the moment an extremely amorphous part of the structure of knowledge.

222 Microfilm, microfiche etc. - There is a group of materials that superficially resemble the other media in that they do not physically resemble a book. These are the various microforms. These however are not a true medium of the kind discussed here. They are a different physical medium for reproducing other media. No one composes directly onto microfilm. It always reproduces something else. Any item, book or non-book, appearing in microform should be considered merely as an edition of the original and indexed as such. The microforms will not be considered in this report. (Since this paragraph was drafted my attention has been drawn to microforms which have been produced as originals. It would seem to be a matter for definition by BNB as to whether these are included in BNB or not. B.C.)

23 Supply of these materials for indexing - The best method of obtaining these materials for indexing is to use copies brought by some institution for its own purposes. The multi-media catalogue itself could not purchase these items. To do so would be expensive and of itself fairly pointless; after having been indexed the items are of no further value to the catalogue and would have to be disposed of to avoid storage costs. All that is really needed is access to them.

231 The Brynmor Jones Report recommended the setting up of a National Centre for Audio visual aids and if such a centre did come into being it would be the logical place from which to start this indexing. It is outside my terms of reference to suggest such a centre for the Catalogue itself, indeed it is not necessary for indexing purposes but when other reasons for setting up such a centre are being considered this one ought also to be included.

232 It is interesting to note that the pattern that might emerge from such a National Centre together with the multi-media catalogue now being considered and the information services in the field already is very similar to that proposed by the National Libraries Committee, for the problems facing the larger medium of books.

233 Until the catalogue has access to such a collection, the indexing will necessarily have to be done from information about the item rather than the item itself. The main source of this must be the manufacturers from their catalogues or publicity material though some may come from the various information services such as that of BISFA or the BMA. Cataloguing from other information rather than the item must always be a second best and it will always be the duty of the catalogue to try and get as much information about the item to be catalogued as is economically feasible at the time. The catalogue should be prepared to publish an amended or amplified entry for an item already catalogued. This could be signalled as such at its first appearance but need only be treated as the standard entry in the next cumulation.

234 It is not however part of the catalogue's task to provoke publication in the terms defined above, of an item. If it learns of the existence of an item it should enquire if it is published if there is any ambiguity about this. But where it is clear that an item is essentially unpublished its further exploitation should be left to the information services for that particular media who are best equipped to assess the need for publication. Having ensured this they can notify the catalogue and an entry will appear in the normal course of events.

24 Specific cataloguing - The cataloguing must be as specific as possible. A catalogue especially a National catalogue is intended to last and to grow. What is being contemplated here is a structure to contain half a century's production of these media. If we are to find from this sequence the one item that is the match to the users' needs and find it quickly which is the users' right then one must be able to identify each item quite clearly. To this end the catalogue entry should be for the item not for the series. These media tend to publish in series partly for good educational reasons; they are conceived as part of an integrated teaching course; and partly for equally good commercial reasons - sell one, sell all. The educational need can be met by the use of the series added entry, which gathers together sufficient information for this purpose. To make the series the main entry would either hide an enormous amount of information or provoke so many analytical entries as to defeat the economics of the simple main entry.

3 Content of the record of an item (Recommendations 22-32)

31 The content of the record will be dictated by the purpose of the

catalogue. These can be to some extent in conflict with one another and this conflict can only be resolved by including redundant information within the record. Having accepted the need for this redundancy, it can be put to other uses to amplify some of the demands other than those of the primary purpose, upon the record.

32 Full cataloguing - This becomes an argument for full cataloguing. The cataloguing code that allows for the fullest specification of information within the record for multi-media materials is the Anglo American cataloguing rules, 1967. The British text has been used as this differs from the American notably in the section of the code with which this report is most concerned; Pt.III, Non-book materials.

321 This code is superior to the codes devised for special materials in two ways.

(i) It is based upon a framework of principle. This allows the cataloguer to deal consistently with new materials even though they may not yet have rules devoted specifically to them.

This quality is of considerable value in a field where materials in new physical forms which give an appearance of difference are continually being produced.

(ii) Taken as a whole, with the chapters on Non-Book materials being read in conjunction with the earlier rules within the code, as is its intention, AACR has more rules for more detailed problems in any one of these media than any of the specialised codes.

Appendix 1 contains a table listing the references for the parts of the catalogue entry from the rules of AACR and from the rules of the special codes.

It remains only to remark that AACR within its rules gives clearer explanations and better examples than do the special codes.

33 Computer demands - There is another argument for full cataloguing which is upon the needs of the machine that enables us to exploit the capabilities of a catalogue far more than ever before. This is of course the computer. If fed according to its own demands we know that it will enable

us to make far more use of the information that we have put into a catalogue than can be done through manual methods. The main limit of a computer is that it cannot act without information, computers cannot guess. So if there is a possibility that someone may wish to use information about an item then it must be included from the beginning. It is possible to add to the existing store of information in a computer but it can be very expensive to do so.

331 MARC format - This is borne out by the format designed to contain information about books, the MARC format. This has the overall shape of a conventional catalogue entry. But within all parts of this the elements are anatomized so that the structure is shown in considerable detail. The format and a cataloguing worksheet based upon it are shown in Appendix 2.

332 Computer and the Multi-media catalogue - It is certain that this catalogue will be produced by computer in the comparatively near future. The BNB and many of the smaller indexing services are already planning to do this. The benefits are twofold (i) it makes the production of the present form of catalogue easier by eliminating clerical routines and (ii) it builds up a file of information in machine readable form.

34 Level of cataloguing for different media - It may be asked whether all these media will need this kind of cataloguing. This is answered by purpose (iii) of the catalogue 'to set a standard of bibliographical control'. The user will expect that he will be able to reach each media by the same routes. This is a reasonable expectation that the catalogue should attempt to meet. There will always be a limit placed on the amount of cataloguing that can be done for an individual item simply by the amount of information available - particularly as the catalogue must work from information rather than the item, but this should be the only reason why an entry point is not supplied.

341 This need for consistency has one important corollary for the printed catalogue. A decision about the indexing of one media holds good for the other dozen or so. The catalogue should not provide something only to withdraw it later because it is not needed or costs too much so the amount of information provided in print from the amount available on the catalogue slip must be vigorously controlled. To begin with it should be relatively parsimonious adding new information only in response to a genuine need of the users. This need not only be a vocal demand though this obviously has an immediate priority. It may also be in response to a yet unfelt need and it should be part of the editor's job to maintain closs contact with the

users to try and assess what these are.

35 Author/Title/Descriptive catalouging of multi-media - The basic problems of cataloguing in these areas are the same for media as for books. For indexing purposes there is no essential difference between print and other media. There are however some exaggerated problems in these media and some adaption to be done. This is caused by the lack of definition of function or of title, two sides of the same coin, in this media.

351 The problem is not confined to these media. When is a compiler an editor, but not a presenter?, is a question faced by the book cataloguer, but he at least is comparing functions within the same medium. The multi-media cataloguer is faced with the vocabulary of a number of media. This means that he must decide what function, in relation to the work, is meant by the terms used on the work. Problems special to a function in media are discussed below, the general problems of a particular function are assumed to be covered by AACR.

352 As AACR uses the authority of the title page and defers to its conventions, so we should also recognise the conventions of the newer media. Not the least troublesome of these is their insistence on naming everyone connected in some way with the work. This means we cannot automatically assume that a name attached to the work has importance in the process of indexing. One of the objectives of the catalogue could be to define which are the important names, in terms of functions, attached to these items.

36 Author - The definition of AACR 'The person or corporate body chiefly responsible for the creation of the intellectual or artistic content of the work' seems a perfectly adequate one. The main point to notice about media is that they are essentially collaborative works. They are all works of shared authorship. It is essential to keep the concept of principal author to the fore. There is a tendency in catalogues of media to give the financial sponsors of an item too much prominence, as though the First Folio were to be indexed under the name of Isaac Jaggard.

361 Body of the entry - This should always contain the names of the authors, though if they appear in another capacity, e.g. as publisher if a corporate author, they need not necessarily be repeated.

362 Production company as publisher - One of the major confusions in this

area is the role of the production company. The assumption must be that its basic function is that of a publisher. It may call a work into existence by commissioning it and it may even dictate its overall shape as a book publisher might commission a book on library classification. But this does not make him the author of the book. So the production company must not be assumed to have made the film or tape, except where it expressly claims this and this claim is not negatived by the name of a director, etc.

363 Distributing company - Care must always be taken not to confuse the distributing company with the production company. The distributing company should be an item in the notes, no more. It has no real attachment to the work as such but is a piece of administrative machinery in the media publishing trade.

37 Physical description - The description of an item has to give a measure of its content and to show what the item looks like. Sometimes one set of figures can do both. This however is not possible in a multi-media catalogue because the measures are not of like with like. A common measure of content is needed for most of these media. This is best supplied for the dynamic media by stating the amount of time needed to display the content in minutes of running time. The indexer can do this by a conversion table from a physical measure, e.g. from the number of inches in a length of tape against the running speed. For the still media the size of the item will define its content.

371 This is a part of the catalogue entry where much use can be made of negative information to simplify the entry, i.e. the elements of a description could be standardised and detail supplied only where it differs from the standard. So it might be that films could be standardised on 16mm. and colour. Only if the film were 35mm. black and white would these be mentioned.

38 Notes - The notes attached to an entry in this catalogue should be very full. They will be a rule rather than an exception for the following reasons:

(i) The items themselves may be hard to examine. There are not very many copies published and many of them require the interposition of a machine to allow them to be viewed.

(ii) These media lack any elaborate bibliographical structure. So notes to facilitate the future construction of this or as a substitute for it, in some measure, if it should not appear are a legitimate part of the purpose.

Where however an archive has been set up for any of these media this is part of its function and care should be taken to avoid duplication.

381 Basic items which must appear in the notes are:

(i) Secondary creators - such people as the main performers, the creative technicians, second unit directors, editors, etc.

(ii) Distributing companies.

(iii) Compatibility of the software to various forms of hardware.

(iv) The standard bibliographical notes relationships to other works, variant titles, etc.

4 Organisation of the catalogue (Recommendations 33-38)

41 Indexing systems - The results of the Cranfield experiments on the relative efficiency of indexing systems suggested that most systems used to their full capacity have about the same level of efficiency. This means that the choice of an indexing system is dependent as much on outside factors as on the merits of the system itself.

42 Name or subject - The catalogue must be a subject catalogue. This is the approach most favoured by the users of these media. This is clear from the investigations carried out and from the catalogues that have been examined. There is also the technical point that a name catalogue is limited in the information it can display through its basic organisation. A name is essentially an individualizing device so any arrangement of this kind is an arrangement of single member classes with only the accidental description of the class name causing any useful collocation.

43 Descriptors or classified catalogue - It is perfectly possible to arrange a subject catalogue by a verbal description of the subject. It needs, however, a degree of organisation other than that inherent in

language itself. Such a system exists in the shape of Coates work on Subject headings exemplified in the British Technology Index. Verbal descriptors have the advantage of immediate access given a little knowledge of the system; which would meet one of the purposes of the multi-media catalogue.

431 The system however would prove cumbersome when cumulated. The sequence of entries would need verbal display. The cross references which become even more necessary in a large volume would further complicate the sequence. Cumulation would emphasise even more that the sequence is still a classified one, for any common descriptor such as METAL would generate a number of entries. The arrangement of these would show classes based on words and arranged by the alphabet.

44 Classified catalogue - This then leaves the classified catalogue. This is an indexing system well suited to the printed page for that displays the systems main advantage; the relationships built into the classification. It also diminishes the system's main disadvantage, the notational barrier, by showing clearly the need for notation and, if the catalogue is properly displayed, the rationale of it. It does not lose these virtues when enlarged upon cumulation, for this only emphasises them.

441 The notation it is true demands two steps to reach the information; first to an index and then to the classified sequence. But the existence of an index in its own right means that it can be made more efficient on its own terms. This makes it more likely that the user will reach his information in no more than two steps.

45 Choice of classification - The question now becomes which classification to use? The catalogue is for British users. Its audience will include many who have no training in librarianship but only the knowledge of it gained from use of libraries.

451 This seems to rule out the Library of Congress classification from the start. This is geared more narrowly to American use than any of the other major classifications. It is also not much used in Great Britain, so casual knowledge of it is not widespread.

452 The Subject Classification of H.E. Bliss is another possibility. It is at the moment being revised for a second edition which will make it in

structure at least the most up to date of the classifications. But it is little known or used, and, in the second edition, quite untried. This leaves two possible candidates for the catalogue, the Universal Decimal classification and the Dewey Decimal classification.

453 Universal Decimal classification - The virtues of the U.D.C. are:-

(i) It is very flexible, so allowing the exact order needed.

(ii) It allows, through its devices and conventions, close specification of the subject.

(iii) It is undergoing continuous revision and there is a machinery by which the user can participate in this.

(iv) It is moderately well known particularly in the scientific world.

Its disadvantages are:-

(i) The notation is cumbersome in the extreme and cannot be simplified without losing some of the virtues of the scheme.

(ii) The scheme lacks stability; the continuous revision means that its shape changes.

(iii) It is only moderately well known.

454 The Dewey Decimal classification - The virtues of D.C. are:-

(i) It allows reasonably close specification of a range of subjects.

(ii) It is revised at about five yearly intervals with the issue of a new edition. This revision is an updating rather than major reconstruction. This gives it

(iii) Stability. There is a reasonable continuity between editions.

(iv) It is very well known to the user who when speaking of

'library classification' is almost invariably thinking of D.C.

Its disadvantages are:-

(i) Its order is rigid and not very helpful in places.

(ii) The level of detail is uneven.

(iii) There is a slight American bias.

455 British National Bibliography classification - This heading covers two classifications. One which exists but which has never been published as a whole is the version of D.C. used by the BNB to arrange its present catalogue. This mitigates some of the disadvantages of D.C. and it is now, sufficiently familiar to librarians.

4551 The second is still at the planning stage; this is the New General Classification. This is being deliberately planned as a bibliographical classification, for the arrangement of information on the printed page.

46 Displayed heads - Whatever classification is decided upon it must be fully displayed within the catalogue. To this end the displayed heads as developed by the BNB should be used. This in its turn makes a verbal extension of the class mark possible so allowing far more detailed specification of the subject.

47 Added entries - The catalogue will be based on the principle of one main entry to which all other entries will be related and from which they are derived. This principle is native to the book catalogue and eminently fitted to it. The added entry proper will only be of subject information. It should be shorter than the main entry but contain sufficient information for an evaluation to be made at the point at which it is being scanned.

471 This demands that it contain the following elements:- the primary author; a short title; the production company; the date; time; size; and compatibility to other machines; followed by the class mark of the main entry so that a reference back can be made.

48 Indexes - Author and title added entries and references will be incorporated in this index. The emphasis in non-book media is on the title of the item. This element should therefore have a full added,

entry, including all the elements given above. The index should provide entry points also from (i) authors and (ii) series titles and these should lead to the most specific point in the classified sequence possible. What should be avoided is reference within the index itself, though for differing forms of name, the see reference, this will be unavoidable.

481 Exclusion from the indexes - What should not be indexed are production companies or distributors. Production companies need only be listed to reveal that they have produced something during the period covered by the catalogue. It may be possible to attach the running number for the catalogue entry to this list. Nothing more elaborate should be attempted. Distributing companies should not even be listed; they occur in the entry and that is sufficient. Secondary creators, e.g. performers, stage designers, are a possible entry point within the index, but it is not clear how much need there is for these. This is a good example of information that should only be supplied after finding out the need for it.

482 Subject indexes - If the author/title index is to lead directly to the classified sequence this will mean a considerable listing of class marks against titles which are only approximations to the subject. To distinguish the different function of the subject index it should be put in a separate sequence and not amalgamated with the author/title index.

483 This separation will allow for a more detailed index which should be constructed by some controlled technique. An index by Chain procedure produces a reasonably full index but a limited one as the relationships in the index entry are the mirror image of those diplayed in the classification A SLIC. index overcomes this disadvantage by permuting the descriptors in the index entry to fixed rules so giving a wider diplay of relationships. It does however generate more entries than the chain index.

5 Production of the catalogue (Recommendations 39-41)

51 The British National Film Catalogue, catalogues about 2100 films in a year. A count of the 'Audio Visual Materials Guide' in 'Visual Education' suggested a total of about 2500 items in a year. There will be considerable overlap between these two and an initial figure has been assumed of 3000 items to be catalogued each year. This figure is about 1/10th of the number of entries in the BNB. It is likely that as interest in media grows there will be a considerable increase in the number of items to be included.

52 Computer production - It is now clear that for the business of storing; repeating and manipulating information the computer is a very useful tool. It is fast and accurate and will perform such tasks as it is instructed to do with far less error than a human being. If used to produce a catalogue it will generate as a by product a file of information that can then be searched by the machine. The problems of information retrieval from a machine readable file have not been solved yet but it can be seen that there is a solution to them.

521 However the computer is not yet a good tool for small amounts of cataloguing. The amount of manipulation required for the purpose of cataloguing is high. This means the cost of the machinery itself, the hardware, and of the intellectual effort needed to instruct the machine; the programming, the software, is high. As small amounts of cataloguing are well within the capacity of the human being to control the use of the machine is not a necessity, so the cost of one must be measured against the other.

522 MARC - It must be stressed that it is the economic factor that is the limitation. A format to contain bibliographical information, the Machine Readable Catalogue record (MARC) is already in existence.

523 All the large scale formats for machine recording of all media that could be found have been examined. None of them are more detailed than MARC. MARC also makes provision for other media though it has not yet made any detailed studies of them, other than an experimental project using MARC for maps which is underway at the Library of Congress.

524 MARC however is not of immediate benefit to the multi-media catalogue for it is designed for large scale operations and the hardware and software are directed to this end. The future benefits, however, should be considerable. MARC is a large scale working system for machine manipulable information. The participating libraries have demonstrated a number of uses for this some of which are wider than the original aims of the system. The technological spin-off from this project over the next few years will be enormous.

53 Fotolist - There is a method of catalogue production developed initially by the BNB that is suitable for a small catalogue such as this. This is Fotolist. This consists in essence of typing all the information for the catalogue on to cards in units of one line at a time. These are ordered and assembled manually. The text is then photographed and from the

negative a photo litho plate is made and the catalogue printed from this. The physical production of the text is highly mechanised. The information manipulation is still entirely human. This technique of producing catalogues is now a standard commercial one and is available from more firms than the BNB production unit.

6 Structure of the cataloguing agency (Recommendations 42-45)

61 Staff - This structure will be based on a figure of 3000 items per annum, to be catalogued. Earlier it has been stated that the cataloguing is best done from the works themselves. It must however be accepted that to begin with the cataloguing will be done from information supplied or obtained from other sources. This will make the actual cataloguing easier; there is less information available to create dilemmas requiring thought.

611 The BNB cataloguing from the works themselves expects an average of 25 items a day catalogued by each cataloguer. This would give a total of 120 man days solely on cataloguing, that is producing the record. From a working year of 47 weeks (excluding holidays) this would leave 115 days for organising the catalogue and administration of the agency.

612 This should be the work of the editor. He should be supported by a high grade secretary whose basic task would be typing the entries. She should however be able to exercise judgement sufficiently to enable her to do elementary descriptive cataloguing and to grasp the principles behind the catalogue. What is needed is a good secretary prepared to acquire additional skills.

62 Accommodation - It should be recognised that cataloguing is a space consuming occupation. A cataloguer will have before him as the minimum needed: the item to be classified; a code of rules and a classification scheme. The page area of the AACR and D.C. (both volumes) when open comes to nearly four square feet alone (516 square inches). Often he needs supporting tools as well; reference books, etc.

621 These books have to be stored on shelves. The catalogue will also be storing sequences of cards. These must not be upset or a lot of basic work is lost. This implies room to move them easily - not to have to ease them in and out of cupboards in a passage. The secretary will be doing similar work so the same conditions apply. This means generous provision

of space should be made.

63 This does not however have to be in Central London. If the cataloguing is to be done from information this does not need access to the items themselves as a general rule. But some items will need to be consulted and to allow for this, the office should not be so remote from London that the travelling time could prove an obstacle. This suggests a location in the middle range of London suburbs. If the agency were to become part of another organisation this would of course dictate its location.

64 Frequency of publication - A figure of 3000 items suggests a quarterly schedule for publication. The flow of publishing is tidal and a more frequent schedule might produce some very thin issues. A longer schedule would make the gap between publication of an item and its appearance in the catalogue too long.

641 Cumulations - There should be an annual and a five yearly cumulation. The annual cumulation lies within the capacity of the present manual system, and by the time the five yearly cumulation is due it should be possible to use the computer to produce this. I do not suggest how, for five years is an enormous time in computer technology, and it is dangerous to predict what processes will be readily available then. It is at this point that a sequence of MARC structured entries could provide the input for the computer.

65 Market for the catalogue - The audience at which the catalogue is aimed are the users of materials in educational technology; these are primarily educationalists and librarians. The information in the catalogue will also be of value to the producers of this material but they are not the prime concern of this catalogue. There are some (450) public library authorities in this country; 44 universities; about 1100 institutions of further education and 160 local education authorities. There are an unknown number of special libraries serving both the producers and users, for industrial training, of these media. It is not unreasonable to assume a small number of subscriptions from abroad as well, for many of these media trascend the language barrier.

651 A potential market of 1000 subscriptions seems possible early on in the life of the catalogue. The BNFC with a more limited range has about 900 subscriptions.

66 Payment by the state - One of the purposes laid down for a national catalogue was a record of the intellectual achievement of the nation. This may be regarded as an archival record or as a census of production. Either way it is a purpose demanded not by the users as such but by the state. There seems no reason why the state should not pay its share directly of the cost of the catalogue for this purpose. This should not amount to half the cost though it is an equal purpose but a lesser proportion for it is fair to say that much of the aims would be achieved incidentally by the catalogue. This payment should not be regarded as a subsidy but a normal payment for services rendered and it should not affect the subscription rates which should be adjusted to the demands of the market. Any surplus income should be ploughed back into improving the catalogue so giving a better service at the price people are prepared to pay.

661 Research and development - There should be a definite proportion of the income of the catalogue devoted to research and development. This effectively means giving the editor time to think about the problems of organising media and producing a catalogue. How this is to be done will depend on circumstances, but a fairly basic solution would be to hire part time assistance for some of the tasks of the editor.

662 In Appendix 3 will be found a budget for a cataloguing agency with the structure outlined here. It suggests that such an agency could be set up for a relatively small capital investment and could thenceforward be self supporting.

7 Summary of the catalogue

71 Content - The catalogue will be a subject classified catalogue with author and title indexes. It should contain all kinds of multi media catalogued to an equal and very full standard. The cataloguing should consist not only of the standard bibliographical approaches but with much fuller physical description and notes. The entry points provided should also be generous not only from the primary level of authors, titles etc. but from the secondary level of minor collaborators, variant titles, analytical subject entries and so on. This is demanded by the relative scarcity of these media; the lack of adequate bibliographical apparatus and the demands of the computer.

72 Physical form - The catalogue will have two physical forms:-

(i) A printed form issued as quarterly parts with annual and five yearly cumulations.

(ii) A machine readable file, initially of the first five years output.

This machine readable file will contain the full content of the catalogue; the printed version will have less than the full amount of information available but this should still amount to fairly full bibliographical cataloguing.

73 Structure of the agency - This has three levels

(i) The directing and controlling element. This is based on indexing skills and controls the catalogue on its intellectual level. It organises the shape and structure of the catalogue and the agency to the sole end of indexing the multi-media produced in Great Britain. Part of this task should be forward planning and research to see how these needs can best be met.

(ii) The administration level which translates and carries out the decisions made at level (i). This ranges through all the processes of producing a catalogue except for

(iii) Physical production, either of print on paper or the production of a machine readable record.

731 These levels are not mutually exclusive and one person may work at differing levels. The amount of staff needed being dictated in the first instance by the amount of work, measured in terms of items published, that needs doing. Initially levels (i) and (ii) can be covered by two people and level (iii) contracted out.

8 Cataloguing agencies already in existence

81 This section describes the agencies already producing major catalogues of various media and assesses their catalogues by the criteria laid down for the multi-media catalogue. This should be stressed; they are not being evaluated by their own criteria and no judgement is implied on their achievement of their own ends.

82 Educational Foundation for Visual Aids (EFVA) - This is the executive arm of the National Committee for Audio Visual Aids (NCAVAE). This committee is composed of representatives of teachers organisations and local education authorities. These pay subscriptions to the NCAVAE and these subscriptions provide part of the income of the EFVA.

821 Its publications include:-

(i) Visual Education. 'A journal of information news and comment on all aspects of the use of audio-visual aids in education'. It includes a pull out supplement 'The Audio-Visual Materials Guide' monthly from November 1968.

(ii) A catalogue, 'Visual Aids', published in eight parts.

(iii) A catalogue of recorded sound for education.

(iv) A catalogue of 8mm cassette loop films.

(v) A series of other catalogues and related publications giving information on materials and equipment available to schools.

(ii), (iii), (iv) and the supplement referred to in (i) are examined in detail below.

822 Visual aids: films filmstrips and transparencies. London EFVA 1966-1968 8 pts. (The National catalogue)

8221 Content - 'Visual aids for use in schools' both as 'teaching material and for general and background work'. The form of material is film in all sizes and conditions; sound; silent mute, etc; film strip; 2"x2" slides and transparencies. Most of the entries refer to material in the EFVA Library, but there are some title entries for films for general use which are not in the library.

8222 Order overall - This is divided first into large subject groups corresponding to teaching areas. So Part 2 is History, Civics, Economics; Part 5, Physics, Mathematics, Astronomy, Chemistry. Within these groups they break down again into relatively large classes, e.g.

Mathematics:

Arithmetic
Algebra
Geometry
Graphs
Applied Mathematics

Within these classes, e.g. Arithmetic entries are arranged by the library catalogue number which incorporates a letter code indicating the type of material. At the end of a group, e.g. Chemistry, there are listed films in, but not available from, the EFVA library,followed by title-a-line entries for material for general use, which is not in the EFVA library.

8223 Elements of the entry - Title (FILM /filmstrip etc): Length: media: col., b.w.; teachers notes; p.c. distributor: date: price: short summary: age level.

8224 Indexes - There is a title index and at the front a list of the subjects contained in the catalogue. There is a list of producers/ distributors.

8225 Summary - A fairly rough and ready tool. If the exact title of a film is not known then only scanning the general subject group will help.

823 'A catalogue of recorded sound for education' 1968

8231 Content - 'Records and tapes for use in education at all levels'. Major exclusion, though not stated, is 'pure music'.

8232 Order - UDC main class with some odd insertions. This not stated but the first group under 'Tapes' is 'Libraries and Institutions'. Within the groups the material is 'Listed alphabetically'.

8233 Elements of entry - 'Title, speed ... name of producer or distributor, producers catalogue number, price'. These are followed by notes which gives performer or composer/contents of a collection and or synopsis of contents.

8234 Lists and indexes - There is a list of distributors/producers and a title index to records/tapes/and series. No index of performers except where these are in the title of the record when they are included in the Title index in the direct form, e.g. Basil Bunting or John Betjeman. It

does not include titles from the contents list given in the entry.

8235 Overall - It is hard to predict exactly where a record would appear without a very precise knowledge of the title or its subject.

824 Audio visual materials guide. Monthly in Visual Education

8241 Content - Film; filmstrip; transparencies; slides; wallcharts; records; tape recordings; flannelgraph models and objects; teaching kits. Implicit limitation to educational material.

8242 Order - Overall - UDC main class order but no class mark is shown. Within these groups the arrangement is by media. This is not consistent - within one group film can appear in two places. This is possibly due to classing specifically and then listing only under main group. This cannot be told as no UDC number is given.

8243 Record elements - These take two forms:-

Films: TITLE/time/sd/col/p.c./dist/date/age range/cost/synopsis
Filmstrip: TITLE/number/col/p.c./dist/date/age range/cost/synopsis

In all of these media the contents of a collection are listed after the collective title. No distinction is made between a collection which might be either filmstrips of 8 frames each or films of 30 minutes each.

8244 Overall - Layout on page very cramped and hard to scan. Items easily missed.

825 8mm Cassette loop films 1967

The second edition of a catalogue published at irregular intervals but kept up to date by Audio visual materials guide (see entry above).

8251 Content - This is not explicitly stated but appears to include all 8mm loop films for use with projectors. The majority are available from the Foundation Film Library but others not so available are also included.

8252 Order - This follows the Foundation Library catalogue, Visual Aids: films and filmstrips (see entry above).

83 British Industrial and Scientific Film Association (BISFA) - The name of this organisation defines its scope. Its basic purpose is to run an information service to its members including appraisal of films and the issue of special subject catalogues. It is the publisher of the British National film catalogue which is run as a semi-independent organisation within BISFA.

831 The British National Film Catalogue

This is published in quarterly parts (from 1969) with an annual volume. This assessment is based on the annual volume for 1967.

8311 Contents - '267 news reels and cine magazines - 924 British non-fiction, 547 foreign non-fiction, 41 short fiction and 83 features' (introduction).

There are no foreign feature films but some foreign short fiction. Effectively this is a catalogue of films distributed in Great Britain rather than British films.

8312 Order - The entries are arranged in classified order using UDC. The classification is specific and uses the relationship device, the colon, though this is not shown in the notation. A reference from the second part of the complex classification symbol is given at its appropriate place in the classified sequence back to the entry under the first part of the classification symbol.

8313 Elements - The elements of the entry are:-

(i) Title(place) dist fee date production
(ii) Company/sponsor
(iii) Technical data
(iv) Credits
(v) Synopsis

The cataloguing is based upon the ASLIB film rules, to produce a fairly full entry. Feature films are limited to a short entry.

8314 Indexes - There are two main indexes

(i) Production index. This is a name index giving the people and companies concerned in the production of film. It includes in its sequence a series of function entries, i.e. all photographers are listed together, as well as an entry under each individual name. All entries in the index lead to a see reference to the title of the film in the

(ii) Subject and title index where the entries are keyed to the class mark. Indexing is chain procedure to schedule numbers including both main, added entries and references.

8315 Overall - A good example of a printed classified catalogue with, if anything, over elaborate indexing of the media, partly due to the code being followed and partly to user demand.

84 Association for programmed learning and educational technology - This is an association of individuals and institutions, educational and commercial, interested in programmed learning and educational technology. It is run on a voluntary basis with some paid assistance. It is on this basis that the catalogue 'Programmes in Print' is produced.

841 Yearbook of educational and instructional technology, 1969-70 incorporating Programmes in Print

8411 Content - 'All teaching programmes - industrial and educational - on the market in Britain' 'Not all the programmes are British ... of 2009 ... 405 were produced overseas'. Also a list of 'Programmes out of Print'. The criteria for inclusion of overseas programmes was that 'branches or subsidiaries or agents of overseas publishers' exist in this country for mention is made of 'other American programmes ... that may be found in bookshops' but which are not listed.

8412 Order - overall - Fairly broad subject groups in alphabetical order, e.g. Biology, Bridge, Carpentry. Some large groupings, e.g. Foreign Languages containing all foreign language; Mathematics, containing Algebra, Geomestry etc. Not Science; Chemistry and Physics are treated separately.

8413 Order within the groups - Book/Machine within these first by name of machine then by age range; primary/secondary/F.E./Universities/Industrial. Order fairly clear on the page but a little fuzzy round the divisions.

8414 Elements of entry - Serial No./series title/TITLE/Author personal or corporate/date of latest edition/publisher/price/country/type of programme/ number of frames/pagination/target population/study time/notes. Indexes and lists.

8415 Subject index - This is full but erratic; e.g. 700, HAND FORGING TOOLS nothing under HAND, FORGING or TOOLS. Subject grouping is engineering. 1891, A SELF INSTRUCTIONAL COURSE ON ALGORITHMS indexed under ALGORITHMS but 1716 WORDS, AXIOMS, THEOREMS nothing under any of these items.

8416 Publishers index - This lists publishers by name. Under each the grouping is by subject then book/machine and within these by title in alphabetical order. The additional information given by this is light and its value is doubtful. There is no index of authors and titles as such.

8417 Programmes out of print -- This has the same order as the publishers index.

8418 Overall - The catalogue aims at comprehensive coverage both of the programmes produced and of the information needed in the entry and makes a good job of this. But the order and imperfect indexes do not allow easy access to the individual programme. If the exact subject is not known or is not indexed if known then all that can be done is to scan a likely subject group.

85 British Association for Commercial and Industrial Education (BACIE)

Aims 'All aspects of commercial education and training in Great Britain' special interest in programmed learning. Membership consists of organisations and individual members and there is a paid secretariat. It has an active information service and publishing programmes which includes:-

851 BACIE register of programmed instruction in the field of education and training in commerce and industry. Vol.2 (i.e. 2nd ed.)

8511 Content - 'Only programmes available in the UK' but this includes programmes produced in the USA if available here (see 879 994). These are limited to 'programmes dealing with industrial and commercial training and related further education. It includes programmes which are unpublished;

mainly are 'Not available outside the company'. The introduction says that 55% of the programmes were produced for internal use.

8512 Order - Overall. Large subject groups - commercial subjects, management subjects, engineering. These are then broken down into smaller subject groups on no apparent principle they are not even in alphabetical order.

Within the subject groups, e.g. commercial subjects - banking, no order is apparent. It is not alphabetical nor by date. It is possibly (1) linear text (2) machines or (1) Linear/Branching. This is not clear.

8513 Elements of entry - Title; author (personal/corp); Target population; publisher/producer; availability; presentation Linear/branching/physical form; study time; notes. There is a brief summary of content after the Title/author statement. Notes are about availability and aims of the programme.

8514 Indexes - A full subject index is provided. There are lists of producers giving addresses. There is no index of authors.

8515 Overall summary - The terms of reference make this a limited catalogue, and if the virtually unpublished items, which are of doubtful value, were excluded it would be a fairly slight catalogue. The entry is a full one but the arrangement of items is so arbitrary as to be unhelpful.

86 British Film Institute - This body financed by a Government grant and members subscriptions promotes the use and study of film of all kinds. It manages the National Film Archive which publishes in several parts a detailed catalogue of its holdings. The Institute also publishes the Monthly Film Bulletin.

861 Monthly Film Bulletin

8611 Contents - Reviews of feature films (and some shorts) shown in Great Britain.

8612 Order - Alphabetical by title with full credit list and long review.

8613 Indexes - Alphabetical list of titles and feature director published annually.

8614 Overall - A systematic publication but outside the scope of a multi-media catalogue since it is essentially a publication of reviews.

87 The British National Bibliography - This agency does not deal with multi media as such but should be considered for the range of its indexing activities.

871 Its basic service is: a list of books the BNB published in the United Kingdom which is arranged by modified Decimal Classification. This appears weekly and cumulates at 3,6,9 months annually. It also publishes cumulations of a number of annual volumes varying from 5 to 3 years. This list excludes completely:

(i) Music
(ii) Maps

It includes partially:

(i) Periodicals
(ii) Fiction
(iii) Government publications.
(iv) Books without a British imprint, if published in the Republic of Ireland.

872 It also provides:

(i) A service of printed cataloguing cards or slips.

(ii) The MARC tapes to selected libraries on an experimental basis.

(iii) It co-operates with the Shared Cataloguing Programme, and is an equal partner in the MARC project, of the Library Congress.

(iv) The British Catalogue of Music.

(v) It makes its production facilities available on a non-profit making basis to other cataloguing services.

873 The BNB is the major indexing service of this country in terms of quantity, in 1967 it catalogued 27,000 items, and in range of skills. Though formally limited to books and music its basic philosophy which is reflected in its research activities is the organisation of communicated knowledge and this certainly subsumes the non-book media.

88 Other agencies - The NCET in conjunction with OSTI did a survey of organisations working in this field. Many of these publish catalogues of a more limited nature which are listed below:

(i) Audio visual language association. This publishes a catalogue in association with EFVA.

(ii) British Universities Film Council. Catalogue of films used and recommended by members of university staffs.

(iii) Centre for information on language teaching. Language teaching abstracts.

(iv) Ministry of Labour training department. Training abstracts.

(v) Scottish central film library. Catalogues and educational films of Scotland catalogue.

881 These catalogues were examined but they seemed so limited either by the materials concerned or the aims of the organisation publishing them that to measure them by the criteria of the multi-media catalogue seemed of little value.

9 Recommendations

Time scale

1. The catalogue should not be considered to have reached its definitive shape either for content or arrangement until the completion of its 5th annual volume.

2. Up to this point changes are to be made as necessary at the beginning of each annual volume. This change and growth should be to an agreed pattern announced in advance to allow for comments from the users of the catalogue.

3. After this point major changes should be limited to 5 yearly intervals to coincide with the start of a new cumulative period.

Content

Media

4. 'Pure Music' i.e. performances without overt educational aims should be excluded. This recommendation is on the grounds of the numbers of items which is disproportionate to their use in this field. However a properly organised discography is certainly needed and attention is drawn to the recommendations on future policy.

5. Feature, i.e. fiction films should be included. They fall outside the definition of educational materials as such but their total number is so small that they could not justify a catalogue of their own.

6. The catalogue from the beginning should include films of all kind; filmstrip; recordings of speech and music not excluded by 4. above and wall charts. Information about all of these is comparatively easy to obtain.

7. The next media to be incorporated should be maps, charts etc. Information about these is obtainable from a limited number of sources.

8. The next media should be programmes. This should be timed to coincide with the next issue of a comprehensive list of programmes after discussion with the two main agencies in this field. I am assuming that the anomaly of two similar catalogues of one limited medium will have been eliminated, by this time.

9. Video tape and EVR should be incorporated not later than the fourth year of the catalogue.

10. The minor media not specifically mentioned here should be included, in any convenient order, between the second and the fourth year of the catalogue.

Coverage

11. The catalogue should be comprehensive for all these media published in the United Kingdom.

12. It should not be retrospective before the starting date of the catalogue or the entry date of any media added later.

13. The definition of published should be 'An item available in multiple copies, priced or having a clear statement of the audience to which they are freely available'. Both conditions must be met but the existence of a single master from which copies may be taken if this is stated, will count as multiple copies. The statement of the audience to which it is available if not priced must be published in the catalogue. If permission to state this is not given it should not be entered in the catalogue.

14. The date of publication is the date the item is made available not the date it was physically completed.

15. Items catalogued at a time later than their publication should be incorporated in the next sequence and correctly positioned at the next cumulation.

16. Foreign material. The catalogue should not include foreign material. To undertake to do so would give an enormous commitment. Thought most of the catalogues of these media do include foreign materials this is done on an arbitrary basis and no principle is involved. However to exclude these materials immediately would cause hardship. Therefore

17. Foreign materials should be included in the quarterly and annual cumulations for not more than five years if no catalogues, published anywhere, of these foreign materials exist. They should be phased out as soon as is reasonable. And in no event should they be included in the five year cumulation.

18. Whilst foreign material is included it should be limited to

that readily available in the UK. This will normally mean that an agency for the publisher exists in the UK but could mean an undertaking by a bookseller to hold a stock of the item. Ordering from abroad is not 'readily available'.

Indexing

19. The unit for indexing should be the individual item not the series to allow for maximum specification of both author and subject.

20. The same standards of indexing should apply to all media.

21. The entries for different kinds of media are to be integrated by subject and only within the most specific subject class possible, are they to be distinguished by form.

22. The catalogue structure should be based upon the principle of the main entry and shortened added entry, not the unit entry.

23. The main entry should be as full as possible.

24. The cataloguing code for author title and descriptive cataloguing should be Anglo-American cataloguing code, British version, 1967.

25. The main entry should be under the principal author, not the title. This will over the years show who creates what and as an added entry will be provided under the title in the index this approach will be well covered.

26. The basic format for the entry should be that adopted by BNB, MARC.

27. The cataloguing should be done on sheets printed with the MARC taps and all possible detail given at this stage.

28. The cataloguing sheets should be filed after use to provide input to the computer for the five yearly cumulation.

29. For issues produced by Fotolist only a medium version of the entry should be printed.

Detail of the entry

30. Production compnay. This should be regarded as the publisher.

31. Collation. The first element of this should be where appropriate a statement of the time needed for the display of the item.

32. Notes. Subject to the rule of notes amplifying, and not repeating, information in the entry; these should be as full as possible. For the Fotolist catalogue only a limited set of these need be used.

Classification

33. The classification should be the latest edition of Dewey Decimal Classification; currently the 17th. This has no less disadvantages than the other classifications and two very considerable advantages: its familiarity to the layman and its use by the BNB.

34. The classification of each item should be completely specific using verbal extension where necessary.

35. A classification of interior style and physical form for these media should be developed (see Appendix 4).

Added entries and references

36. Added entries should be kept to a minimum. For author cataloguing there should be one under title. For subject cataloguing only analytical entries should be made.

37. References should be made freely when cataloguing but only a limited set of these should be used for the Fotolist catalogue.

Indexes

38. The subject index should be constructed by chain procedure.

Production

39. The catalogue should appear quarterly with annual and five yearly cumulations.

40. The method of production for the quarterly and annual cumulations should initially be by Fotolist or similar method.

41. The production of the five yearly cumulation should be by computer and the generation of a machine readable file be regarded as an important subsidiary element of this.

42. Production agency. A separate agency to produce this catalogue should not be set up but one of the existing agencies invited to expand its production. This should not be regarded as a measure to reduce the cost of the catalogue as such which should be still funded on the basis suggested in this report. It essentially a measure to reduce redundancy in this field and there is no reason why the agency running the catalogue should be expected to subsidise it from any of its other activities; equally if the existence of the catalogue and its staff contributes to the agencies' other activities then it should pay for this service in cash or kind.

43. The agency which should be invited to run the catalogue is the British National Film Catalogue. Neither BACIE nor the Association for Programmed Learning and Educational Technology have machinery to produce a regularly issued catalogue of this kind, and so they would have to set up an agency. The EFVA has a cataloguing agency but the aims and style of this catalogue have been so far very different from the rigorous standards needed for a National Multi Media catalogue. The BNFC comes nearest to these standards though it differs in detail from the multi-media catalogue.

Finance

44. The subscription to the catalogue should be based upon the normal market rates. It should not be artificially lowered by subsidy either direct or indirect. The catalogue is a specialised service and it is unlikely that lowering the subscription rate will of itself, persuade anyone that they need this service. Where the service is needed but cannot be afforded the appropriate place from which a subsidy should come is the place needing the service, i.e. the school or institution which the librarian is serving.

45. The catalogue should be self-supporting and should not be subsidised. Payment from the state and the support from the main agency do not constitute a subsidy. Working capital may be obtained by inviting subscriptions in advance and OSTI should be prepared to act as guarantor to enable an overdraft to be raised if necessary.

Future policy

46. These recommendations have been aimed towards setting up a multi-media cataloguing agency. This is the immediate task though it is assumed to take five years to complete. But there are two future aims for the multi-media catalogue once set up. They are not unconnected and progress towards them could start at any point from the initial decision to set up the multi-media catalogue.

47. The establishment of a national discography for recorded music having regard to the existence both of the multi-media catalogue and the British catalogue of music.

48. An eventual merger of the multi-media catalogue with BNB for the following reasons:-

    (i) It removes the danger always present with a small organisation of discontinuity through sickness, resignation, etc.

(ii) It will add to the indexing skills and services of the BNB the special knowledge needed for multi-media.

(iii) It will enable these media to share in the indexing services to be provided by the BNB.

(iv) As the state is paying for its share in the multi-media catalogue and is also providing considerable funds to the BNB one could be offset against the other.

(v) It will help to promote the logical end implied by the existence of the National Multi-media catalogue; the BNB and the British Catalogue of Music. This is the National Bibliographic Service envisaged by the Dainton Committee.

Bernard Chibnall

Antony Croghan

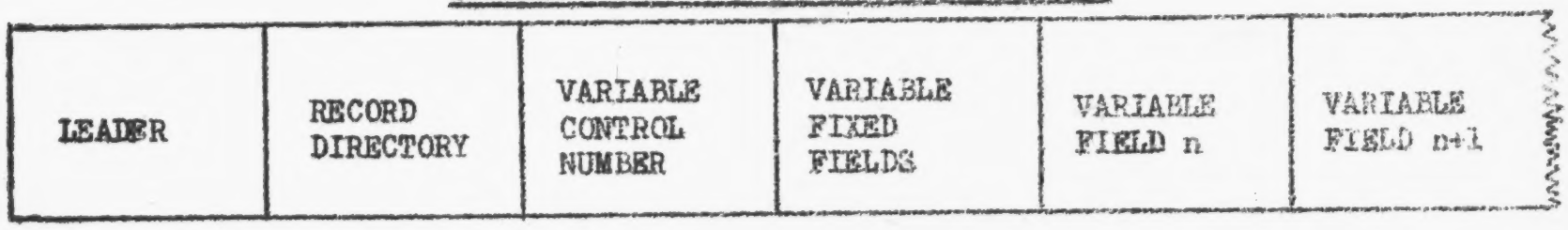
APPENDIX 1 - Code Correlation Table

Record	General		Film			Prints & Slides	Maps/Charts		Recordings	
	AACR	DAVI	AA67 Ch12	ASLIB	NFA	AACR	AACR	B.M.	AA67 ChXV 'as music'	IAMUL V2 Short Code
HEADING	Pt1	page 48	220	1,11,15 31,39	1,22	260-263	210-211	2	250 230-232	S6 S11
ORIGINATOR AUTHOR	Pt1 Ch.1-5			4 Credits	4 Credits	266	212c	8	244	S7
TITLE	Pt1 Ch.4	1	222	2 16	2 23	265	212B	7	252B	S19
SUB-TITLE	R113	2		2	2b-c	265B				
ANCILLARY ORIGINATOR	136		227					12	251	S8
EDITION	R135	1r7					212E			S22
PLACE	140			5	5	267	212F			
PUBLISHER PRODUCER	141	VII	223	4	4			12	252C	S23
DATE OF ORIGIN	142	VI	223D	6	6	268				S24
NUMBER OF PARTS	143B-C	III2	224B			269	212G	15c 15d	252D	S27
KINDS OF PARTS	143D									
DIMENSIONS	143E	III,1 3		7	7		212D Scale			S26
SHAPE							213 214			
SERIES	144	19	225 229	11	20	270	212H		252E	
NOTES	145	X11	226	9	9	272	212J	17	252F	S29-31
ADDED ENTRIES	146:33		221	14		271	212L	Sect.B	251	S32
REFERENCES	Ch.5									
SUBJECT CODINGS										S35

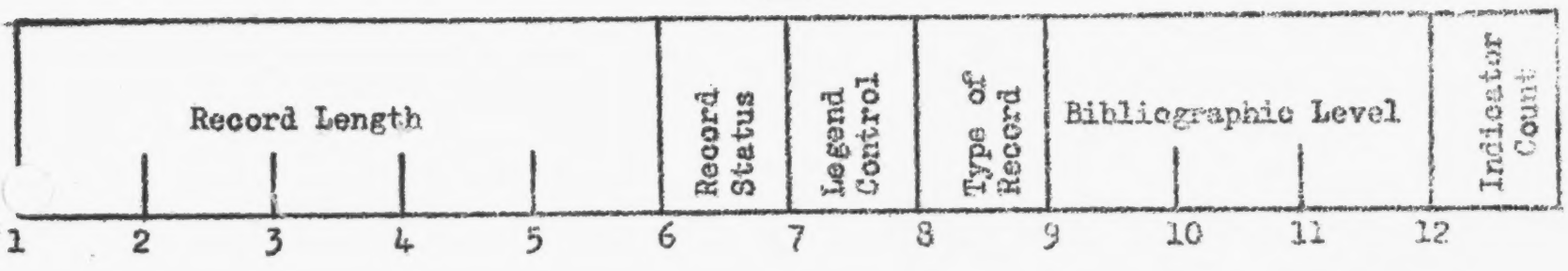
APPENDIX 2

MARC Format-Tag Indicators - Cataloguing
worksheet showing use of MARC for Maps

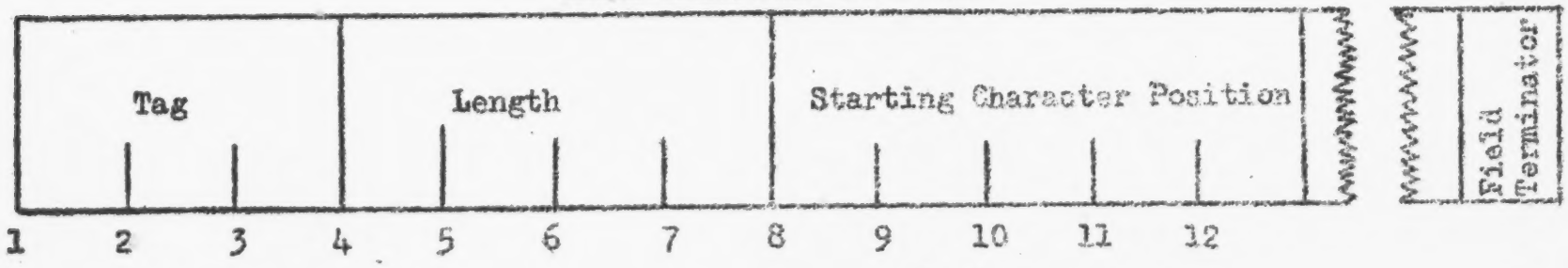
SUMMARY OUTLINE OF THE MARK II FORMAT



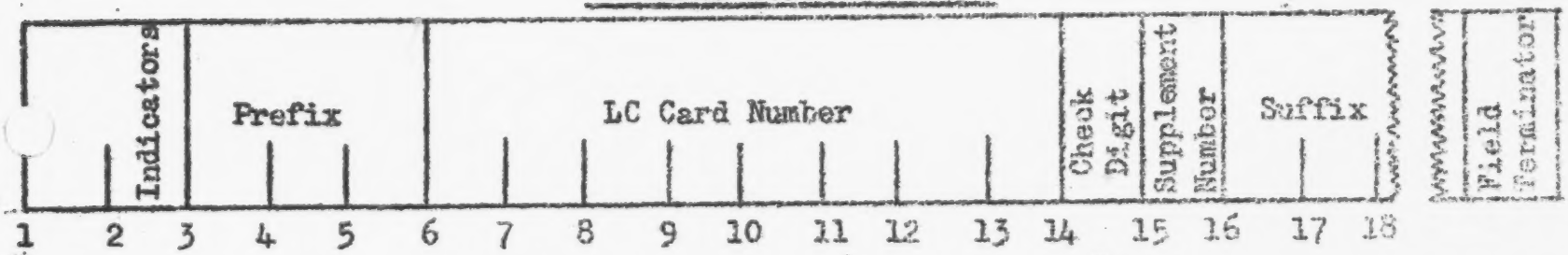
LEADER



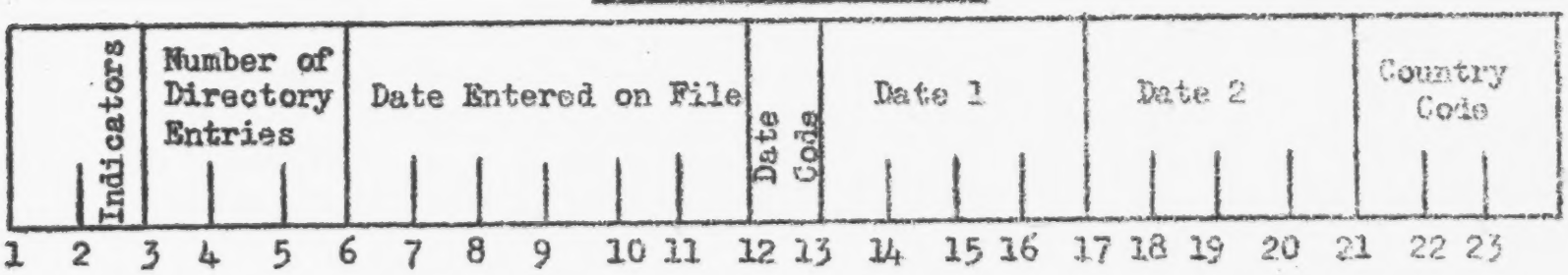
RECORD DIRECTORY ENTRIES

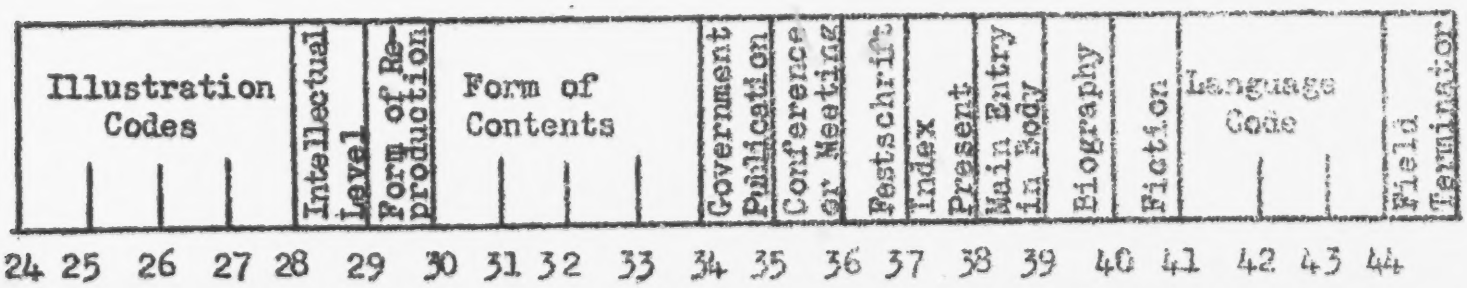


VARIABLE CONTROL NUMBER



VARIABLE FIXED FIELDS


Indicators
Number of Directory Entries
Date Entered on File
Date Code
Date 1
Date 2
Country Code
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23



INDICATOR TABLE

Tag	Field		Indicator	
003	LANGUAGE		Multilanguage	0
			Translation	1
050	LC CALL NUMBER		Book in LC	0
			Book not in LC	1
	MAIN ENTRY		Main Entry Not Subject	Main Entry Is Subject
100	(Personal Name)	Forename	0	4
		Single Surname	1	5
		Multiple Surname	2	6
		Name of Family	3	7
110	(Corporate Name)			
111		Surname (inverted)	0	4
		Place, or Place + Name	1	5
		Name (direct Order)	2	6
120	(Corporate Name with Form Subheading)		0	1
130	(Uniform Title Heading)		0	1
200	UNIFORM TITLE		Not Printed on LC Cards	0
			Printed on LC Cards	1
210	ROMANIZED TITLE		No Title Added Entry	0
			Title Added Entry	1
240	TITLE STATEMENT		No Title Added Entry	0
			Title Added Entry	1
261	PUBLISHER		Publisher Not Main Entry	0
			Publisher Is Main Entry	1
	SERIES NOTES		Author Not Main Entry	Author is Main Entry
400	(Personal Author/Title)	Forename	0	4
		Single Surname	1	5
		Multiple Surname	2	6
		Name of Family	3	7
410	(Corporate Author/Title)			
411		Surname (inverted)	0	4
		Place, or Place + Name	1	5
		Name (direct order)	2	6
490	(Series Untraced or Traced Differently)		Series Not Traced	0
			Series Traced Differently	1
	SUBJECT ADDED ENTRIES			
600	(Personal)	Forename		0
		Single Surname		1
		Multiple Surname		2
		Name of Family		3
610	(Corporate)			
611		Surname (inverted)		0
		Place, or Place + Name		1
		Name (direct order)		2
	OTHER ADDED ENTRIES		Alternative	Secondary	Analytical
700	(Personal)	Forename	@	D	H
		Single Surname	A	E	I
		Multiple Surname	B	F	J
		Name of Family	C	G	K
710	(Corporate)				
711		Surname (inverted)	@	D	H
		Place, or Place + Name	A	E	I
		Name (direct order)	B	F	J
720	(Corporate with Form Subheading)		0	1	2
730	(Uniform Title Heading)		0	1	2
	SERIES ADDED ENTRIES			
800	(Personal Author/Title)	Forename		0
		Single Surname		1
		Multiple Surname		2
		Name of Family		3
810	(Corporate/Author/Title)			
811		Surname (inverted)		0
		Place, or Place + Name		1
		Name (direct order)		2

TAG	
050 ≠ b	G4364 . R63 1968 . D58 GM 68-30
1102	Don G. Simpson & Associates
2450	City of Ridgecrest, Kern County, California (including community of China Lake, Calif.) Revised May 1968.
260 ≠ c	Bakersfield (Calif.) 1968
300	map 26 x 20 cm.
505	Scale 1:36,000; 1" = 3000'
500	"This map produced and distributed through the joint efforts and co-operation of the following: City of Ridgecrest, California, Ridgecrest Chamber of Commerce, Desert Empire Board of Realtors, COMARCO. Street index on verso.
	G4364 . R63 1968 . D58 mkh (4) Oct 68

650 ≠ x	1. Ridgecrest, Calif. - Maps.
650 ≠ x	2. China Lake, Calif. - Maps.

008	PUB DATE 3. S	DATE 1 4. 1968	DATE 2 5.	PUB COUNTRY 6.	BASE ELEM 7.	REPRO FORM 8.
	RELIEF 9.	REC TYPE 10. A	INDEX 11. 1	LANG 12. ENG	BIBL 13. A	SOURCE 14. 4364
	TAG CLASS 052 K63	TAG AREA 053	TAG SUB AREA 054	TAG SUBJ 1 055 4364	TAG SUBJ 2 056 C435	TAG PUB 057

GEOGRAPHY AND MAP DIVISION - MARK II INPUT WORKSHEET
LC 78-22 (4/68)

APPENDIX 3

Budget

Capital Costs

		£
FURNITURE		
Desks:	Executive 2 @ £51	102
	Typist @ £34	34
Chairs:	Staff 3 @ £9	27
	Visitors @ £11	11
Storage:	Cabinets - 4-drawer filing 4 @ £24	96
	Card 5x3 - 12 drawer @ £40	40
	Punch - 5000 capacity @ £10	10
	Cupboards 6'x3' 2 @ £22	44
	Shelves - 90 foot run	42
EQUIPMENT		
Typewriters:	1 electric @ £200	200
	1 office @ £75	75
Recording machine 1 @ £85		85
Stationery including printing		100
Sundries		50
Publicity		200
	TOTAL	1,116

Budget

Annual Expenditures

	£
WAGES	
Professional 1 @ APT V, £1,715 - 1,925	1850
Clercial/Typist 1 @ £1,200	1200
TAXES	
N.H.I.	136
S.E.T.	62
Superannuation @ 6%	180
Rent including rates 600 sq.ft. @ 30/- p.s.f.	900
Cleaning/maintenance/service charges, Heat/light etc.	included with rent
OFFICE MATERIALS	
Stationery	100 (est)
Postage, Telephone) office only	50, 100
Postage for the parts of the catalogue included in production costs	
Publicity costs	100
Research and Development	
6 months salary and insurance @ A.P.T. II, £1055-1265	690
Production costs recutting	
These have been costed on the basis of an estimate for the BNFC, from a commercial firm, not BNB.	
They include postage and packing	
Parts 4 x 1,000	1800
Annual volume	1800
TOTAL	8968

Income

	£
Subscriptions 1,000 @ £8 - 10 - 0	8500
Payment from the state @ 20%	1800
	10300

5 yearly volume

No figures can be drawn up for this. It may be assumed to be financed by a combination of subscription and accumulated profit.

APPENDIX 4

(See notes - Appendix 4 page 4.)

Media Classification

Common sub-divisions of form

Cassettes/containers
(use only after narrow specification of form)

PHYSICAL FORM

Kits: (Use only for kits containing items from different categories.) If the kit has items from different media in the same category class at the general head for the category and add this.

Moving image: Film - 35 mm
16 mm
8 mm
Standard
Super
Video tape - tape
wire

Still image: 2 Dimensional - slides 2 x 2"
Filmstrips
Transparencies

Prints
Pictures and drawings

Wallcharts

Geographical artefacts - Maps
Charts

Globes
Relief models

3 Dimensional objects other than Geographical -
Models and representations
Specimens/Realia

Non visual records: Sound - Magnetic and other recordings
Cylinders

Discs - 16.5
33.3
45
78

Acoustic

Machine readable records - Magnetic codings
Tapes - 2 channel
4 channel
Discs

Paper codings
Tapes - 5 track
8 track

Cards - 40 column
80 column

Programmed materials: Linear
Branching
Composite

Computer

Other machines

Book form: scrambled

INTERIOR FORM

Moving image: Film - Aesthetic style - Western
Musical
Horror etc.

Still image: 2 Dimenstional - Aesthetic style

Geographical artefacts - Graphic styles

Non visual records: Sound - Aesthetic styles

Programmed materials: Branching
Linear
Composite

NOTES

1. Citation order is Interior form/physical form.

2. Interior form. This is a relatively intangible thing based mainly upon a consensus of subjective opinion. As such it needs time to develop and this has not been available for many of these media. This schedule then is a very tentative suggestion of what may prove to be the interior form of some of these media.

3. Physical form. Many of the forms listed can be further sub-divided by size but this should only be done where the size is a standard one in which a substantial amount of material is produced.

4. Containers and kits. A container is literally that; a physical holder only. A kit however implies an intellectual grouping of some kind.

5. Notation. This will be dependent upon the main scheme chosen. If the schedule is given a separate notation this should be retroactive and consideration should be retroactive and consideration should be given to relating it to the BNB supplementary schedules.

APPENDIX 5

List of sources of materials

One of the objectives of the study was to compile a list of sources of materials for the catalogue. This has been done and the list exists in a form analogous to that proposed for the main catalogue. The main list is on 80 column punched cards. From this two print-outs have been produced (i) an alphabetical list of names and (ii) a list in classified order of both main and subsidiary subject interests of the producers. The main list on the cards contains more information than this and lists arranged in differing orders based on this information could be produced, e.g. by the media concerned.

Content

The list includes producers and/or distributors of films; filmstrips; wallcharts; sound recordings (mainly of speech rather than music); programmed instruction and any other miscellaneous media that was available. For each name on the list the following information was given where this was available: (i) main subject, (ii) secondary subject, (iii) name, (iv) address, (v) kind of organisation producting the material, e.g. commercial firm, school, etc., (vi) the form of the material, e.g. filmstrip and (vii) the number of items available.

Format

The format chosen was the 80 column card and it was decided to limit each entry to one card. This meant a considerable amount of coding to get the full content of the entry within these limits. The information was given as follows: subjects were classified by modified UDC to a limit of 6 digits each. The name was given in free text truncated where necessary to fit the space available. The address was coded as the number of the appropriate telephone directory, so a London address would be coded 001.

The kind of organisation and the kind of material were given arbitrary codings and the number of items supplied is a simple number.

The list contains some 1400 entries. This is the total number in the